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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR		ATTORNEY DOCKET NO.
08/877,684	06/17/97	VAUGHAN	G	96B035/2

IM61/0329

EXXON CHEMICAL COMPANY
LAW TECHNOLOGY
P O BOX 2149
BAYTOWN TX 77522

EXAMINER	
PASTERCZYK,J	
ART UNIT	PAPER NUMBER
1755	

DATE MAILED: 03/29/99

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.	Applicant(s)
08/877,684	Vaughan et al.
Examiner	**Group Art Unit**
J. Pasterczyk	1755

☒ Responsive to communication(s) filed on *Feb 8, 1999*.

☒ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire *3* month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) *1-8 and 10-32* is/are pending in the application.

Of the above, claim(s) *6-8, 10-12, 22-29, and 31* is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) *1-5, 13-21, 30, and 32* is/are rejected.

☐ Claim(s) _____ is/are objected to.

☒ Claims *1-8 and 10-32* are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐approved ☐disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____.

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

1. This Office action is in response to the amendment filed 2/8/99 and refers to the first Office action mailed 10/6/98.

2. Applicant's election with traverse of group I in Paper No. 8 is acknowledged. The traversal is on the ground(s) that groups I and II have the same technical distinctions. This is not found persuasive because this is U.S. patent practice, not PCT patent practice, and US practice requires merely that the inventions be separately patentable and that there be an undue burden on the examiner to search the plural inventions. As noted in the original restriction requirement, the supported transition metal compound is separately classified from the same material in the presence of a cocatalyst, hence there is indeed an undue burden on the examiner to search the two different inventions.

The requirement is still deemed proper and is therefore made FINAL. Since newly-presented claim 31 depends from the nonelected claims, it shall also be considered to be nonelected and withdrawn from consideration.

3. To reiterate what the examiner stated in paragraph 6 of the first Office action, the examiner will consider the term "system" used throughout the specification and claims of the present application to mean the 35 USC 101 statutory class of patentable subject matter "composition", unless applicants expressly amend both the claims and specification to use another statutory class of subject matter, i.e. process, machine, or manufacture. "System" has no clear meaning within the scope of 35 USC 101, which sets forth the subject matter patentable within

the United States, as opposed to a dictionary definition which contains a plethora of definitions, which would lead to an indefiniteness rejection if used in claims.

4. The abstract of the disclosure is objected to because it is not descriptive of the invention as now claimed. Correction is required. See MPEP § 608.01(b).

5. The amendment filed 2/8/99 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: the deletion of "0" on p. 2, l. 33, and the deletion of "covalently" on p. 3, l. 10. The amendment to the abstract may also be seen as new matter if applicants attempt to use this amendment to introduce support materials other than those originally in the specification into either the claims or specification.

Applicant is required to cancel the new matter in the reply to this Office action.

6. The rejections of paragraphs 11 and 14 of the first Office action are withdrawn due to amendment and in favor of those given below.

7. Claims 1-5, 13-21, 30 and 32 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification as originally filed required that there be a covalent bond between the transition metal of the metal complex and the E atoms. This was found on p. 3, l. 10 as well as in the formulas of p. 15, table I. Claims 1 and 13 now

require that there be merely a "bond" of whatever type between these two elements. This bond could be covalent, ionic, dative, van der Waals, or of any other type known in chemistry. This represents a broadening of the scope of protection sought by the claims beyond that which was originally supported by the specification. Applicants may wish to assert that the bond between the metal atom and the E atom was dative; however, this is not at all clear since a dative bond is normally drawn as an arrow from the atom donating electrons to the atom receiving the electrons, and no such arrow symbol was found in the structural figures of the preferred compounds for the transition metal portion of the claimed catalyst "system". It is not clear from the specification what the intended correction was to be; *in re Oda*, 443 F.2d 1200, 170 USPQ 268, 272 (CCPA 1971). For instance, the actual formulas in table I could have been of some sort of Zwitterionic structures, or the entire formulas could have been some sort of ionic species. It is not clear from the specification just what was intended.

8. Claims 1-5, 13-21, 30 and 32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 1 and 13, the preamble recitation of intended use "for polymerization of olefin monomers" carries no patentable weight; *In re Spada*, 911 F.2d 705, 15 USPQ2d 1655 (Fed. Cir. 1990); *In re Tuominen*, 213 USPQ 89 (CCPA 1982); *In re Pearson*, 494 F.2d 1399, 181 USPQ 641 (CCPA 1964); *In re Zierden*, 162 USPQ 102 (CCPA 1969). Further in these claims, it is still not clear against what the group 9, 10 or 11 metal complex is "stabilized" against; is it

hydrolysis? Oxidation? Some other particular reaction with a particular reactant? It is suggested that

--bonded to-- be used instead since the entire entity is a molecule, and reciting further the identity of L makes it unclear if this L is the same bidentate ligand as that "stabilizing" the metal complex. Further in the preambles, above the first formula, "the Group 9, 10 or 11 metal complex" strictly lacks antecedent basis since it is "stabilized by a bidentate ligand". At the end of the recitation of the identity of the L group, it is not clear what is meant by "the oxidation state of MX_r is satisfied"; does this mean that the oxidation state of the entire LMX_r molecule is neutral? If so, this appears to conflict with the recitations of claims 17 and 21, in which the metal-containing species is a cation. If it has some other meaning, it is requested that applicants point out where in the specification this term is clearly defined. In the fifth line from the end of both independent claims, insert a hyphen between "hydrocarbyl" and "containing". In the fourth line from the end of each of these claims, "or other univalent anionic ligand" is both omnibus and vague and indefinite, since there is no disclosure of what these particular ligands might be, and one of ordinary skill in the art would be forced to perform numerous burdensome experiments in order to discover what they might be that actually function in the manner intended for the composition; see *In re Gardner*, 166 USPQ 138 (CCPA 1970).

In claims 30 and 32, it is not clear about what entity this "square planar geometry" is "stabilized", or whether this is for the resting state or active species of some particular molecule, particularly a catalyst which by definition is reacting with something else at the moment it is a

catalyst, or whether this includes the particular species as it is supported on the solid support, which would likely distort whatever geometry the species had in solution or the solid state by itself.

In claim 19, it is still not clear what is meant by an "anion precursor"; is the entity itself to become the anion, or does it cause something else to become an anion? This is particularly pertinent since this precursor is recited as being a halide salt, and halides are the entities that normally become anions. What applicants appear to mean is that the cocatalyst ionizes the transition metal species to a cation, and that counter anion is non-coordinating to the resulting transition metal species, probably due to sterics about the atom on the anion which bears the formal negative charge as well as the electronegativity of the preferred fluorine atoms. Note claims 17 and 18 in this regard.

Claims 17 and 21 appear to conflict with claims 13 and 1 from which they depend in the recitation that the "oxidation state of MX_t is satisfied" versus that the metal is in a cationic species in these dependent claims.

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless --
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

10. Claims 1-3, 5, 13-15, 30 and 32 are rejected under 35 U.S.C. 102(b) as being anticipated by Sommazzi as cited in and for the reasons of record found in paragraph 12 of the first Office action.

Sommazzi is a statutory bar to the patentability of the above claims. Arguments as to the intended use of the composition of Sommazzi are moot with regard to this ground of rejection, being more suitable to a 35 USC 103 rejection. The composition of Sommazzi still reads on that of the present claims; note especially col. 4, l. 40 through col. 5, l. 12 of the reference, which describes the ligand which would correspond to L of the present claims, with X of the present claims corresponding to the carbamate or amine ligands of Sommazzi, particularly given the omnibus language of claims 1 and 13 with regard to the identity of these ligands.

11. Claims 1-5, 13-21, 30 and 32 are rejected under 35 U.S.C. 102(e) as being anticipated by Brookhart et al., USP 5,866,663 (hereafter referred to as Brookhart) (note ancestry data).

Brookhart discloses the present invention as claimed; see abstract; col. 1-33, and col. 38, top; especially example 98.

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. McLain discloses the present invention also, but has an ineffective date against the present application.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to J. Pasterczyk whose telephone number is (703) 308-3497. Our fax number is 305-3599.

Mark L. Bell
Supervisory Patent Examiner
Technology Center 1700

J. Pasterczyk

March 26, 1999